

FIG. 1A

<i>C.r.</i>	ATGAATTGGCAAGAAATTTTA-----	-----TCACAAGTACACTAATATCATTAGTG
<i>E.c.</i>	ATGAATTACAAAAAGTTTCA-----	-----TAACAGCG-ATTGATATCATTAAATA
<i>A.m.</i>	ATGAATTACAGAGAATTGTTACAGGGGCCCTG-TCAGGCC-ACAGTCTGGCCCTGGCT	***** * * * * *
<i>C.r.</i>	TCATTTT--TACCTGGTGTGTCCTTCTGATGTAATACAGGAAGACAGCAACCCAGCAG	
<i>E.c.</i>	TCCTTCTCTTACCTGGAGTATCATTTCGGACCCAGGTAGTGGTCA---TTAACCG	
<i>A.m.</i>	CCCTACTTGTAGGGGGCGTAGTGGCATCTCCCATGAGTCACGAAGTGGCTTCTGAAG	***** * * * * *
<i>C.r.</i>	GCAGTGTACATTAGCGCAAAATAACATGCCAACTGCCACTGCATCACATTTGGTAAAATGTCAA	
<i>E.c.</i>	GTAATTCTACATCAGTGGAAAATAACGATGCCAAGGCTCGATTGGAGTATTCTCTG	
<i>A.m.</i>	GGGGAGTAATGGGAGGTAGCTTTACGTGGCTTACGCCCCAGCATTCCCTCT	***** * * * *
<i>C.r.</i>	TCAAAGAAGATTCAAAATACTCAAAACGGTATTGGTCTAAAAAGATTGGGATGGCG	
<i>E.c.</i>	CTAAGGAAAGAAATAACACAGTGGAGTGGACTGAAAGCAAAATTGGGACGGAA	
<i>A.m.</i>	GTТАCCCTCGTTCGACATGCCGTGAGTCAAAGCAAGAACCTCA--TACGTTAGGGCTATG	***** * * * *
<i>C.r.</i>	TTAAAACACCATCAGATTCTAGCAATACTAACTTACTGAAAGACTATT	
<i>E.c.</i>	GCGCAATATC--CAACTCCTCCCCAACGA-----TGTATTCACTGTCTCAAATTATT	
<i>A.m.</i>	ACAAGAGCATTGCAACGATTGATGTGAGTGTGCCAGCAAACTTTCCAATCTGGCTACA	***** * * * *
<i>C.r.</i>	CTTTCAAGATATGAAAACAATCCGTTTAGGTTTCGCTGGGCAATTGGGTACTCAATG	
<i>E.c.</i>	CATTAAATAATGAAAACAACCCGGTTTAGGTTTGCAAGGACTATGGTTACTCAATGG	
<i>A.m.</i>	CTTTTGCCCTCTCTAAACTTAATCACGTCTTACGGGGCTGTGGGATATTCTCTGG	***** * * * *

1B
FIG.

FIG. 1C

1 ggaatqaattcagggacatttctactcttaaagcggttgcataccatcatctgcagcta
 N E F R D I S T L K A F A T P S S A A A T
 61 ctccagacttagcaacagtaacactgagtgtgtcactttggagtagaaacttggaggaa
 P D L A T V T L S V C H F G V E L G G R
 121 gatttaacttctaattttattattgccacatgttaaaaataatctaaacttgcattt
 F N F *
 181 attgctacaaataaataaaatagtgccaaaaaatgttagcaataagggggggggggqa
 241 ctaattactatctgccatatccctactaccactaacataatctgacaaaatacaa
 301 cagttctggagaaataaacaatatttaaattttcttacaaaaccat~~tat~~atcttgc
 361 actaaaaactagcttataacttgcttttacattgttaggttactactgttaatttgc
 -10
 421 cactattcagggttaatatgaactgcgaaaaatttttataacaactgcattaacatta
 RBS M N C E K F F I T T A L T L
 481 ctaatgtcccttcttacctggaaatcacttctgtatccaggatgacaacattagt
 L M S F L P G I S L S D P V Q D D N I S
 541 ggtaatttctacatcagtggaaagatataatgccaagcgcttcgcatttggagttttct
 G N F Y I S G K Y M P S A S H F G V F S
 601 gccaaggaaagaaagaaatacacaacagttggagttttggaaatagagcaagattggataga
 A K E E R N T T V G V F G I E Q D W D R
 661 tggtaatatctagaaccacttaagcgatattcaccgtccaaatttattttcatttaa
 C V I S R T T L S D I F T V P N Y S F K
 721 tataaaaataatctattttcaggatttgcaggagctattggctactcaatggatggcca
 Y E N N L F S G F A G A I G Y S M D G P
 781 agaatagagcttgaagtatctTatgaagcattcgatgttaaaaatcaaggttaacaattat
 R I E L E V S Y E A F D V K N Q G N N Y
 841 aagaacgaagcacatagatattatgctctgtcccatcttcggcacagagacacagata
 K N E A H R Y Y A L S H L L G T E T Q I
 901 gatggcggcaggcgtgcgtctgtcttctaataatgaaggactactgtataatcattt
 D G A G S A S V F L I N E G L L D K S F
 961 atgctgaacgcatttatgtataatgttaatgttttttttttttttttttttttttttttt
 M L N A C Y D V I S E G I P F S P Y I C
 1021 gcaggattttgtattgtattgtatccatgtttqaagctataatccaaaaatttttttt
 A G I G I D L V S M F E A I N P K I S Y
 1081 caaggaaaatttaggttacccataagcccaagcttctgtgttttttttttttttttt
 Q G K L G L S Y P I S P E A S V F I G G
 1141 cattttcataagggtataggaaacagaatttagagatattccctactatgataacctgt
 H F H K V I G N E F R D I P T M I P S E
 1201 tcagcgcttcggcaggaaaaggaaactaccctgcaatagtaacactggacgttttttt
 S A L A G K G N Y P A I V T L D V F Y F
 1261 ggcataagaacttggaggaagggttaacttccaaacttttttttttttttttttttt
 G I E L G G R F N F Q L *
 1321 atagtggcaaaaagaatgttagcaataaaggggggggggggggggggggggggggg
 1381 atatcccttactaccacttacacaaaataatctgacaaaataacacagttcaacaaaaggt
 1441 aaacaattttaatttgcatttatgtgagaaccattgtatcttataaaaaactagct
 -35
 1501 taacttgctttacattgcagttctactattgttaatttttttttttttttttttttt
 -10
 RBS
 1561 atatgaatttgcaaaaatttttataacaactgcatttagtataatgtcccttctac
 M N C K F F I T T A L V S L M S F L P
 1621 ctggaaatattttctgtatccaggcgtcaagggtacaatatttagtggtaatttctatgtta
 G I S F S D P V Q G D N I S G N F Y V S
 1681 gtggcaagtatatgccaagtgcgttcgcattttggcatgtttctgcacaaaagaagaaaaaa
 G K Y M P S A S H F G M F S A K E E K N
 1741 atcctactgttgcattgtatggcttaaaaacaagatggggaggtagctcatcaagtc
 P T V A L Y G L K Q D W E G I S S S S H
 1801 acaatgataatcatttcaataacaagggttattcatttttttttttttttttttttttt
 N D N H F N N K G Y S F K Y E N N P F L
 1861 tagggttgcaggagctattggttattcaatgggtggccaagagtaggttttttttttt
 G F A G A I G Y S M G G P R V E F E V S
 1921 cctatgaaacatttgcgttaaaaatcagggtataactataaaaaatgtatgctcacagat
 Y E T F D V K N Q G N N Y K N D A H R Y
 1981 actgtgcatt
 C A L G Q Q D N S G I P K T S K Y V L L
 2041 taaaaagcgaaggattgttgcatttatcatattgtctaaatgtatgtatgtatataataa
 K S E G L L D I S F M L N A C Y D I I N
 2101 acgagagcatacccttgcatttatcatatgtgcagggttttttttttttttttttttt
 E S I P L S P Y I C A G V G T D L I S M
 2161 tgtttqaagcttacaaaatcttaccaagggaaagtttttttttttttttttttttt
 F E A T N P K I S Y Q G K L G L S Y S I
 2221 taaacccagaagcttctgtatttttttttttttttttttttttttttttttttttttt
 N P E A S V F I G G H F H K V I G N E F
 2281 ttagggacattccctactctgaaagcatttttttttttttttttttttttttttttt
 R D I P T L K A F V T S S A T P D L A I

FIG. 2A

2341 tagtaacactaagtgtatgtcatttggaaatagaacttggaggaagggttaacttcta
 V T L S V C H F G I E L G G R F N F *
 2401 ttgttattgccacatgtaaaaataatctaaactgtttcattattgtcacagtaat
 2461 aaaaatagtggcaaaagaatgttagaataaagaagggggggggactaaatgtctatt
 2521 accatatcccttattataccacttacactaaataacttgacaataacacagcttctgga
 2581 aaaacaaacaatacttaaattcttacaaaaccat~~ttat~~atcttgcactaaaaacta
 -35
 2641 gcttataactttgtttacattgttagttctactattgttaatttatttcactat~~ttt~~ag
 -10
 2701 gtgcaatatgaattgcaaaaaattttataacaactacatttagtgcataatgtcctt
 RBS M N C K K F F I T T T L V S L M S F
 2761 cttaccttggaaatatcatttctgatgcagtaacgacaatgttgggttattctta
 L P G I S F S D A V Q N D N V G G N F Y
 2821 tatcagtggaaatatgtaccaagtgtttcacatttggcgtattctgtctaaacagga
 I S G K Y V P S V S H F G V F S A K Q E
 2881 aagaaatacaacaatcgagatttggataaagaacaagattggatggcagcacatata
 R N T T I G V F G L K Q D W D G S T I S
 2941 taaaaattctccagaaaatacatttaacgttccaaattattcatttaaatatgaaaataa
 K N S P E N T F N V P N Y S F K Y E N N
 3001 tccattttaggtttcagggactgttgcaggactgttgcatttaatgaatggccaagaata
 P F L G F A G A V G Y L M N G P R I E L
 3061 agaaatgtcctatgaaacatttgcattttgcattttgcattttgcattttgcatttt
 E M S Y E T F D V K N Q G N N Y K N D A
 3121 tcacaaatattatgtcttaacccataacagtggggaaagctaagcaatgcaggtgataa
 H K Y Y A L T H N S G G K L S N A G D K
 3181 gttgttttctaaaaatgaaggactacttgcattatcactatgttgcattttgcatt
 F V F L K N E G L L D I S L M L N A C Y
 3241 tcatgtataaagtgaaggaataccttctcattacatatgtgcagggtttgcatt
 D V I S E G I P F S P Y I C A G V G T D
 3301 ttaatatccatgttgcagctataaaccctaaaatttcttatacaaggaaaggtagtt
 L I S M F E A I N P K I S Y Q G K L G L
 3361 gagttactccataagcccagaagcattctgtttttgttgcattttcataagggtat
 S Y S I S P E A S V F V G G H F H K V I
 3421 agggaaatgattcagagatattctgcattgcattgcatttttttttttttttttttt
 G N E F R D I P A M I P S T S T L T G N
 3481 tcactttactataactaactaactgttatgcacttggagttggacttggaggaaagg
 H F T I V T L S V C H F G V E L G G R F
 3541 taactttatatttatttgcacatgttaaaaataatctaaacttgcattttatttgc
 N F *
 3601 ctgcaggtaaaaaatagtggcaaaagaatgttagcaataaagggggggggggactag
 3661 ttataaagtgcatttttcacatgcatttttttttttttttttttttttttttttt
 3721 tattacttacctgacgtaatatatttttttttttttttttttttttttttttttt
 -35
 3781 aaaaatttatattctgacttgcatttatattgcacacttctactattgttaatttatttgc
 -10
 3841 actattaggtttatatgtattttcataacaactgtgcattgtatcat
 RBS M N Y K K V F I T S A L I S L
 3901 atatcttctcacgtggaggatcatttccgcacccgcggatgttgcatttttttttt
 I S S L P G V S F S D P A G S G I N G N
 3961 ttctacatcagtggaaaatacatgcatttttttttttttttttttttttttttttt
 F Y I S G K Y M P S A S H F G V F S A K
 4021 gaagaaagaaataacaacagtggaggatgttttttttttttttttttttttttttt
 E E R N T T V G V F G L K Q N W D G S A
 4081 atatccaaactcccccaacgcatttttttttttttttttttttttttttttttttt
 I S N S S P N D V F T V S N Y S F K Y E
 4141 aacaaccgttttttaggtttgcaggaggatatttttttttttttttttttttttt
 N N P F L G F A G A I G Y S M D G P R I
 4201 gagcttgcatt
 E L E V S Y E T F D V K N Q G N N Y K N
 4261 gaagcacatagatattgtctatcccataactcaggcaggcagacatgatgtgcatt
 E A H R Y C A L S H N S A A D M S S A S
 4321 aataattttgtcttctaaaaatgttgcatttttttttttttttttttttttttttt
 N N F V F L K N E G L L D I S F M L N A
 4381 tgctatgacgttagggcaggcataccttttttttttttttttttttttttttttt
 C Y D V V G E G I P F S P Y I C A G I G
 4441 actgatttagtatccatgttgcaggactacaaatcctaaaatttcttaccaaggaa
 T D L V S M F E A T N P K I S Y Q G K L
 4501 gtttaagctacttataagcccagaagcatttttttttttttttttttttttttttt
 G L S Y S I S P E A S V F I G G H F H K
 4561 gtaatagggaaacgaaatttagagatattcctactataatacctacttggatca
 V I G N E F R D I P T I I P T G S T L A
 4621 gaaaaaggaaactaccctgcaatagtaacttggatgtatgcacttggaaatagaa
 G K G N Y P A I V I L D V C H F G I E M
 4681 gga

FIG. 2B

1 ttgttaaatatgaaatataaaaaactttacagtaactgcattagtattattaactc
 RBS M K Y K K T F T V T A L V L L T S
 61 cttaacacatttatacctttatagtccagcacgtgccagtaatcacaacttcta
 F T H F I P F Y S P A R A S T I H N F Y
 121 cattagtggaaaatataatgccaacagcgtcacatttggaaattttcagctaaagaaga
 I S G K Y M P T A S H F G I F S A K E E
 181 acaaagtttactaaggatttagttgggttagatcaacgattatcacataatattataaa
 Q S F T K V L V G L D Q R L S H N I I N
 241 caataatgatacagcaaagagtcttaaggttcaaaattattcattaaataacaaaataaa
 N N D T A K S L K V Q N Y S F K Y K N N
 301 cccatttcttagattgcaggagctattggattcaataggcaattcaagaatagaact
 P F L G F A G A I G Y S I G N S R I E L
 361 agaagtatcacatgaaatatttatactaaaacccaggaaacaattattaaatgactc
 E V S H E I F D T K N P G N N Y L N D S
 421 tcacaaatattgcgttatctcatggaagtcacatatgcagtgtggaaatagcggaga
 H K Y C A L S H G S H I C S D G N S G D
 481 ttggtacactgcaaaaactgataagttgtacttctgaaaaatgaaggttactgacgt
 W Y T A K T D K F V L L K N E G L L D V
 541 ctcatttatgttaaacgcattgttatgacataacaactgaaaaaatgcctttcaccta
 S F M L N A C Y D I T T E K M P F S P Y
 601 tatatgtgcaggattggactgtatctcatatctatgtttgagacacacaaaacaaaat
 I C A G I G T D L I S M F E T T Q N K I
 661 atcttatcaagaaaagttagtttaactataactataaaactcaagagttctgttttgc
 S Y Q G K L G L N Y T I N S R V S V F A
 721 aggtggcacttcataaggtaataggtaatgaaattaaaggattcctactcttacc
 G G H F H K V I G N E F K G I P T L L P
 781 tgatggatcaaacattaaagtacaacagtctgcaacagtaacattagatgtgtccattt
 D G S N I K V Q Q S A T V T L D V C H F
 841 cgggttagagatggaaagttagattttttataacttctattgtacatgtaaaaata
 G L E I G S R F F F *
 901 gtactagttgttctgtggttataaacgcgaagagagaaatagttagtaataaattaga
 961 aagttaaatattagaaaagtcatatgttttattgtcattgataactcaactaaaagtag
 1021 tataaatgttacttataataattttacgttagtataattttccctacaaaagccac
 1081 tagtatttataactaaaagtataactttggctgtatttaattttactactgt
 -35 -10
 1141 taatttactttcactgttctttgttaaatatgaaattgtaaaaagtttcacaataagt
 RBS M N C K K V F T I S
 1201 gcattgatatcatccatatacttcctacctaattgtctcataactctaaccagtatgtt
 A L I S S I Y F L P N V S Y S N P V Y G
 1261 aacagtatgtatggtaattttacatcatcagggaaagtagatgccaagtgttcctcattt
 N S M Y G N F Y I S G K Y M P S V P H F
 1321 ggaatttttcagctgaagaagaaaaaaaagacaactgttagtataatggcttaaaagaa
 G I F S A E E E K K T T V V Y G L K E
 1381 aactggcaggagatgcaatatctagtcaaagtccagatgataatttaccattcgaaat
 N W A G D A I S S Q S P D D N F T I R N
 1441 tactcattcaagtatgcaagcaacaagtttttagggttgcagtagctattggttactcg
 Y S F K Y A S N K F L G F A V A I G Y S
 1501 ataggcagtccaagaatagaagttgagatgtcttatgaaagcatttgatgtaaaaaatcaa
 I G S P R I E V E M S Y E A F D V K N Q
 1561 ggtaacaatt
 G N N

FIG. 2C

1 acatgtatacattatagtacaacaatgttaccgtatTTtattcataagttaaatct
 61 ataccattctttcactttatcagaagactttatTTtacaaaactcatgacgtatag
 121 tgcacaaaataaacacactgcaactgcaatcactacgtaaaactttactctttt
 181 acaactaaaatactaataaaagtaatatagtataaaaaatcttaagtaacTTGACAat
 241 attactctgataTAGCATatgtcttagtatctctatactaaacgtttatataattGGAGca
 301 tattaATGAAAGCTATCAAATTCAACTTAATGTCGCTTACTATTTGCAGCAATATTT
 M K A I K F I L N V C L L F A → A I F L
 361 TAGGGTATTCCCTATATTACAAAACAAGGCATATTCAAACAAAACATCATGATAACACCTA
 G Y S Y I T K Q G I F Q T K H H D T P N
 421 ATACTACTATAACAAATGAAGACGGTATTCAATCTAGCTTAGCTTAATCAATCAAGACG
 T T I P N E D G I Q S S F S L I N Q D G
 481 GTAAAACAGTAACCAGCCAAGATTCCCTAGGGAAACACATGTTAGTTTGGATTCT
 K T V T S Q D F L G K H M L V L F G F S
 541 CTGCATGTAAGCATTGCCCTGCAGAATTGGGATTAGTATCTGAAGCAGTGCACAAAC
 A C K S I C P A E L G L V S E A L A Q L
 601 TTGGTAATAATGCAGACAAATTACAAGTAATTTTATTACAATTGATCAGAAAAATGATA
 G N N A D K L Q V I F I T I D P K N D T
 661 CTGTAGAAAAATTAAAAGAATTTCATGAACATTGATTCAAGAATTCAAATGTTAACAG
 V E K L K E F H E H F D S R I Q M L T G
 721 GAAATACTGAAGACATTAATCAAATAATTAAAAATTATAAAATATGTTGGACAAGCAG
 N T E D I N Q I I K N Y K I Y V G Q A D
 781 ATAAAGATCATCAAATTAAACCATTCTGCAATAATGTACCTTATTGACAAAAAGGATCAT
 K D H Q I N H S A I M Y L I D K K G S Y
 841 ATCTTCACACTTCATTCCAGATTAAACATCAAAGAAAATCAAGTAGATAAGTTACTAT
 L S H F I P D L K S Q E N Q V D K L L S
 901 CTTTAGTTAACAGTATCTGTAAttaataattaattAAAGagaatagtacacaCTTTt
 L V K Q Y L *
 961 ataaattcatggaatacgttggatgagtaggttttttagtatttttagtgctaataac
 1021 attggcat

FIG. 3A

1 ggaaaatctcatgtaaaacgtgaaatactatattcttttaaataccaatacaattgaata
 61 caaaaaaaaaactttacaacttattatgttatcttaaaaaccttatttaagattccttatg
 121 tcacaaaataacaaaaatactatttacaaaatacaccacaatttcatcaaataaaaaaaa
 181 ctatacacttattatactacagtagatataccataaaagatttaagtaacTTGACAta
 241 atattaccttggtaTAGCATatgattcagtattttatattaaaatttattatgtattGGAA
 301 GcataaaaATGAAAGTTATCAAATTTATACTTAATATCTGTTATTATTCAGCAATT
 M K V I K F I L N I C L L F A → A I F
 361 TCTAGGATAATTCCCTACGTAACAAAACAAGGCATTTCAAGTAAGAGATCATAACACTCC
 L G Y S Y V T K Q G I F Q V R D H N T P
 421 CAATACAAATATATCAAATAAAGCCAGCATTACTACTAGTTTCGTTAGTAAATCAAGA
 N T N I S N K A S I T T S F S L V N Q D
 481 TGGAAATACAGTAAATAGTCAGGATTTGGGAAAATACATGCTAGTTTATTTGGATT
 G N T V N S Q D F L G K Y M L V L F G F
 541 TTCTTCATGTAAAAGCATCTGCCCTGCTGAATTAGGAATAGGCATCTGAAGTTCTCACA
 S S C K S I C P A E L G I A S E V L S Q
 601 GCTTGGTAATGACACAGACAAGTACAAGTAATTTCAATTGATCCAACAAATGA
 L G N D T D K L Q V I F I T I D P T N D
 661 TACTGTACAAAAATTAAAAACATTTCATGAACATTGATCCTAGAATTCAAATGCTAAC
 T V Q K L K T F H E H F D P R I Q M L T
 721 AGGCAGTGCAGAAGATATTGAAAAATAATAAAAAATTACAAAATATATGTTGGACAAGC
 G S A E D I E K I I K N Y K I Y V G Q A
 781 AGATAAAAGATAATCAAATTGATCACTCTGCCATAATGTACATTATCGATAAAAAGGAGA
 D K D N Q I D H S A I M Y I I D K K G E
 841 ATACATTTCACACTTCTCCAGATTAAAATCAACAGAAAATCAAGTAGATAAGTTACT
 Y I S H F S P D L K S T E N Q V D K L L
 901 ATCTATAATAAAAACAATATCTCTAAAttaataattaattaAAGAGAatagtacacaCTCT
 S I I K Q Y L *
 961 Tatataaaattcatggatatatgtgatggtagattctttggtggttatcgctaatt
 1021 acatta

FIG. 3B